

Mr. James Minadeo graduated with a BS degree in Chemistry from the University of Delaware. Mr. Minadeo has been employed in the electronics industry for over 13 years. His background includes analytical testing, developing new materials, and computer development. He has worked as a Product Manager for Avante International Technology for one year, supervising research and development of the Vote-Trakker™. Mr. Minadeo also manages several related product lines for Avante's sister company, AI Technology.

Avante International Technology, Inc. is a pioneer in the use of smart card technology for access control, time-attendance, and debit applications since 1995. Employing some of its patented interconnection technologies, Avante and AIT have co-developed many patents that are pending on manufacturing robust smart (Radio Frequency Identification, RFID) tags and smart card with unparalleled performance.

Since the last national election in year 2000, Avante has used some of the logistics and technologies used in physical access control systems to create a new voting paradigm. Mr. Minadeo has coordinated Avante engineers to work on a patent pending technology to prevent voter fraud. This system will prevent someone from voting more than once at a cost similar to the credit card verification process.

Avante International Technology and AI Technology are co-located in an ISO 9001 manufacturing facility within a 16 acres campus in Princeton Junction, New Jersey. AIT and Avante also have supporting offices in Midwest, West Coast, and Hong Kong. AIT-Avante has recently acquired another 32,000 square feet facility within a 70 acres campus in Salinas, California, which is scheduled to open in the fall of 2001.

**Testimony on behalf of Dr. Kevin Chung by James Minadeo  
Avante International Technology, Inc.  
Committee on House Administration  
Election Reform Hearing  
May 17, 2001**

My name is James Minadeo. I am a product manager for Avante International Technology, Inc.

The most important question remaining unanswered from the last national election is **"Was my vote counted and counted correctly?"**

We think a tangible receipt with a set of randomly generated reference numbers for the voter is the only way to ensure all voters that their votes have been counted and counted correctly. Some sample formats of these receipts generated by VOTE-TRAKKER™ are enclosed for your review. VOTE-TRAKKER™ is a new voting system invented in the aftermath of our last national election crisis.

NJ021115003029 712861 Apr 05, 2001
Presidential Elector For Voted
US Senator Voted
House of Representative No Vote
County Clerk Voted
Board of Chosen Freeholders No Vote
Board of Chosen Freeholders Voted
Board of Chosen Freeholders Voted
Public Question 1 Voted
Public Question 2 No Vote
Public Question 3 Voted
Thank you for voting!

NJ021111002026 482961 Feb 26, 2001
President / Vice President GEORGE WASHINGTON, Andrew JACKSON
US Senator John HANCOCK
House of Representative Ben Franklin
County Clerk John Quincy ADAMS
Board of Chosen Freeholders PAUL BEVERE
Board of Chosen Freeholders William T. TAFT
Board of Chosen Freeholders Theodore ROOSEVELT
Public Question 1 Yes
Public Question 2 No
Public Question 3 Yes
Thank you for voting!

We believe for the first in voting history, we have provided an absolute proof and certainty to voters ensuring their votes are counted and counted correctly and yet maintaining the voters' privacy. The use of VOTE-TRAKKER™ systems will certainly represent a paradigm shift in our voting system.

Most of us will agree that any of the current voting methods and technologies can be improved to less than 1% error rate if the voter is properly "educated". The problem is how to ensure this "proper education" is given to every voter? Even if all voters are "properly educated", the error in "residual votes" is still close to 1% for the best of current systems.

The second most important question we must ask ourselves is:

**Is a 1% error rate acceptable for our democracy and is this the best we can do?**

We think not! In fact, we can readily assure the voters that every vote cast is counted and counted correctly today! We believe the residual vote problem can be totally eliminated with a properly engineered electronic voting system. In VOTE-TRAKKER™, we have done exactly that by asking a voter to select a "Skip Contest" or "Abstain, No Vote" option if they do not wish to select any of the candidates/choices on the ballot. "Voter intent" can be removed from the voting discussion forever with the use of the VOTE-TRAKKER™ system.

The following represents your current choices. Pressing on any specific selections will allow you to change your choices for those positions.

**General Election**  
Mercer County, NJ (Princeton Boro, Dist. 8) Monday, Apr 16, 2001  
**Presidential Elector For**  
(Vote for 1. Press on your choice.)

<b>Republican</b> <b>George W. BUSH</b> Dick Cheney
<b>Democratic</b> <b>Al GORE</b> Joe Lieberman
<b>Libertarian Party</b> Harry BROWNE Art Olivier
<b>Constitution Party</b> Howard PHILLIPS Curtis Frazier
<b>Independent</b> John HAGELIN Laura Ticiati
<b>Reform Party</b>

**Choice 1: Press on a candidate's name to select it**  
**Choice 2: Press here to "write-in" your candidate.**  
**Choice 3: Press on "No Vote" (as shown) or "Skip Contest"**

**Cast Vote** **No Vote (Abstain)** **Write-In Candidate**

There is, but one last big question we believe that must be addressed. **Will our military personnel stationed overseas actually get their votes counted at the same time with the same weight as everyone else's votes?**

We believe one single standalone machine, like VOTE-TRAKKER™, should be able to produce any ballot from the 200,000 jurisdictions to allow anyone of our military personnel in a particular location to vote and have their votes counted correctly at the same time as everyone else. VOTE-TRAKKER™ is built to fulfill this promise. Anyone authorized to vote as an absentee voter will be able to pull-up their local ballot and vote. Their votes will be counted correctly and at the same time as the rest of the country.

Contrary to current perceptions, such a voting system and product that addresses all of the above questions is available today in United States! Not two years from now!

### **General Election**

Mercer County, NJ (Princeton Boro, Dist. 8)

Monday, Apr 16, 2001

Using keypad, please enter your voter identifier number(VID#)  
by pressing on the appropriate numbers/letters.

1	2	3	4	5	6	7	8	9	0	-
Q	W	E	R	T	Y	U	I	O	P	
A	S	D	F	G	H	J	K	L	BackSpace	
Z	X	C	V							

**OK**

This is a seven segment "Voter-Identifier-Number" (VID#) identifies the state, county, municipality, precinct, sub-division, party, and a set of "randomly generated number" of the voter to help pull out the correct ballot for the specific voter.

This VID# may be substituted with an encoded smart card.

**How can we adopt the newer and better solutions quickly?** We think the national certification process is important and very necessary. Every vendor should be responsible to produce reliable machines like any other industry. However, we think it should be focused more on the system and data security, and less on the product reliability. No data should be corrupted or lost even if the machine becomes defective during voting! No voting machine should expose itself to tampering without leaving an audit trail. Vote count accuracy, system and data security should be the primary certification criteria. A properly engineered direct recording electronic voting system should have an "unbreakable" system security, vote accuracy of 100%, as well as voter privacy.

**How affordable are these systems and are they available for the year-2002 elections?** A total national requirement of 700,000 sets of VOTE-TRAKKER™ can be readily made in a year. To put this in perspective, this quantity and capacity that we need for voting systems merely represents less than 1% of the current personal computer capacity. We do not see much difficulty in meeting the 2002 national election requirement even if we have to make all 700,000 sets of VOTE-TRAKKER™.

The 700,000 voting systems that are required to retrofit the entire nation's voting system, should cost less than \$3.5 billion. This cost is actually less if one were to account for the fact that more voters can vote on a single voting machine because of the shorter time required for an easy to use system. It can be further reduced if more counties and jurisdictions allow early voting. We think the cost can be cut to less than \$2 billion if most states allow early voting. This will encourage voter participation plus save considerable tax dollars.

Thank you.

Dr. Kevin Chung graduated with BA degree in Physics (1974) and Ph.D. degree in Material Sciences and Engineering (1980), both from Rutgers University. Dr. Chung joined RCA David Sarnoff Research Laboratory as technical staff from 1980 to 1985. Since then, Dr. Chung founded AIT (AI Technology, Inc.) located in Princeton Junction, NJ. AIT has more than 15 years of achievements in special electronic adhesives and interconnections. Dr. Chung has over 6 patents and 30 other patent pending on voting systems, physical access control systems and different material and applications in electronic applications.

Dr. Kevin Chung started and led Avante International Technology, Inc. in pioneering the use of smart card technology for access control, time-attendance, and debit applications since 1995. Employing some of its patented interconnection technologies, Avante and AIT have co-developed many patents that are pending on manufacturing robust smart (Radio Frequency Identification, RFID) tags and smart card with unparalleled performance.

Since the last national election in year 2000, Dr. Chung and Avante staff used some of the logistics and technologies used in physical access control systems to create a new voting paradigm. Dr. Kevin Chung and Avante engineers are currently working on a patent pending technology to prevent voter fraud. This system will prevent someone from voting more than once at a cost similar to the credit card verification process.

Dr. Chung is CEO and president of Avante International Technology and AI Technology that are co-located in an ISO 9001 manufacturing facility within a 16 acres campus in Princeton Junction, New Jersey. AIT and Avante also has supporting offices in Midwest, West coast, and Hong Kong. AIT-Avante has recently acquired another 32,000 square feet facility within a 70 acres campus in Salinas, California scheduled to be open in the Fall of 2001.

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